

Listing of Claims:

1. (Previously Presented) An inter-computer data transfer method for transferring data between a plurality of computers each including a main storage device, a processor for issuing a communication process command and a communication device for processing the communication command from said processor and communicating with another one of said computers through a switched network, comprising the step of:

each of a transmission section and a reception section of said communication device including a translation look aside buffer for retaining a plurality of translation look aside buffer entries;

determining, when a communication command including information of that one of the computers which is a sending source is issued from said processor, one of the translation look aside buffer entries which is to be used in accordance with the computer of the sending source by means of said reception section,

wherein the communication command further includes a destination computer number, a destination process number, a destination logical address, a transfer length, a sending source computer number, a sending source process number, and a sending source logical address, and

wherein the communication command is transmitted divisionally in a plurality of communication packets over the switched network, in order to assure reliability of communication.

2. (Original) An inter-computer data transfer method as claimed in claim 1, wherein said transmission section of said communication device produces a communication packet including the information of the computer of the sending source and transmits the communication packet to another one of said computers.

3. (Previously Presented) An inter-computer data transfer method as claimed in claim 1, further comprising limiting the number of communication commands to be processed simultaneously to the same destination computer from the computer of the sending source, in order to increase a hit ratio of the translation look aside buffer.

4. (Original) An inter-computer data transfer method as claimed in claim 2, wherein an identification number of a processing command in the computer of the sending source is applied to a communication packet by said communication device, and for different communication packets which have the same identification number of the processing command, the same translation look aside buffer entry is used by said reception section of said communication device.

5. (Previously Presented) An inter-computer network system, comprising:
a plurality of computers connected to each other through a switched network;
each of said computers including a main storage device, a processor for issuing a communication processing command, and a communication device for processing the communication command from said processor and communicating with another one of said computers through said switched network;
said communication device including a transmission section for transmitting a communication to said switched network and a reception section for receiving a communication from said switched network;
each of said transmission section and said reception section including a translation look aside buffer for retaining a plurality of translation look aside buffer entries;
said processor issuing the communication command which includes information of that one of the computers which is a sending source;
said reception section determining one of the translation look aside buffer entries which is to be used in accordance with the computer of the sending source,
wherein the communication command further includes a destination computer number, a destination process number, a destination logical address, a transfer length, a sending source computer number, a sending source process number, and a sending source logical address, and
wherein the communication command is transmitted divisionally in a plurality of communication packets over the switched network, in order to assure reliability of communication.

6. (Original) An inter-commuter network system as claimed in claim 5, wherein said transmission section produces a communication packet including the information of the computer of the sending source and transmits the communication packet to another one of said computers.

7. (Original) An inter-commuter network system as claimed in claim 5, wherein said communication apparatus limits the number of communication commands to be processed simultaneously to the same destination computer from the computer of the sending source.

8. (Original) An inter-commuter network system as claimed in claim 6, wherein said communication apparatus applies an identification number of a processing command in the computer of the sending source to a communication packet, and said reception section uses the same translation look aside buffer entry for different communication packets which have the same identification number of the processing command.

9. (Original) An inter-computer network system according to claim 6, wherein said transmission section of said communication device extracts a communication command from said main storage device in accordance with an instruction from said processor, converts a logical address of data of the sending source in the communication command into a physical address, extracts transmission data from said main storage device, produces a communication packet from the extracted data and the communication command and transmits the communication packet to the destination computer.

10. (Original) An inter-computer network system as claimed in claim 5, wherein said reception section of said communication device receives a communication packet from said switched network, converts a destination logical address into a destination physical address for said main storage device and writes data in the communication packet into the destination physical address.

11. (Previously Presented) An inter-computer network system as claimed in claim 6, wherein the communication packet includes a command code for setting a communication command, a destination computer number for setting a destination computer number for the communication command, a process number representative of a process of a communication opposite party for setting the destination process number of the communication command, a destination logical address representative of a writing destination of the data in the destination process for setting the destination logical address for the packet, a data length for setting a length of data of the packet, a sending source computer number for identification of a sending source for setting a sending source computer number of the communication command, a command identification number, and data to be written into the destination.

12. (Previously Presented) An inter-computer data transfer method as claimed in claim 1, wherein the communication command further includes a communication command maximum simultaneous process number that indicates a number of processes simultaneously to a same destination, for transmission over the switched network, wherein when the communication command maximum simultaneous process number is two or more, the transmission section adds a command identification number indicative of an identification number of a command to be processed simultaneously to each of the communication packets to designate a translation lookaside buffer entry to be used by the reception section.

13 (Previously Presented) An inter-computer data transfer system as claimed in claim 5, wherein the communication command further includes a communication command maximum simultaneous process number that indicates a number of processes simultaneously to a same destination, for transmission over the switched network, wherein when the communication command maximum simultaneous process number is two or more, the transmission section adds a command identification number indicative of an identification number of a command to be processed simultaneously to each of the communication packets to designate a translation lookaside buffer entry to be used by the reception section.

14. (Previously Presented) An inter-computer data transfer system as claimed in claim 5, further comprising:

means for suppressing a number of communication commands to be processed simultaneously to a same destination.

15. (Previously Presented) An inter-computer data transfer method for transferring data between a plurality of computers each including a main storage device, a processor for issuing a communication process command and a communication device for processing the communication command from said processor and communicating with another one of said computers through a switched network, comprising the steps of:

each of a transmission section and a reception section of said communication device including a translation look aside buffer for retaining a plurality of translation look aside buffer entries;

determining, when a communication command including information of that one of the computers which is a sending source is issued from said processor, one of the translation look aside buffer entries which is to be used in accordance with the computer of the sending source by means of said reception section,

wherein said processor does not carry out any address conversion but instead sends out the communication command and a logical address to said communication device.

16. (Previously Presented) An inter-computer data transfer method as claimed in claim 15, wherein said transmission section of said communication device produces a communication packet including the information of the computer of the sending source and transmits the communication packet to another one of said computers.

17. (Previously Presented) An inter-computer data transfer method as claimed in claim 15, further comprising limiting the number of communication commands to be processed simultaneously to the same destination computer from the computer of the sending source, in order to increase a hit ratio of the translation look aside buffer.

18. (Previously Presented) An inter-computer data transfer method as claimed in claim 16, wherein an identification number of a processing command in the computer of the sending source is applied to a communication packet by said communication device, and for

different communication packets which have the same identification number of the processing command, the same translation look aside buffer entry is used by said reception section of said communication device.

19. (Previously Presented) An inter-computer network system, comprising:
- a plurality of computers connected to each other through a switched network;
 - each of said computers including a main storage device, a processor for issuing a communication processing command, and a communication device for processing the communication command from said processor and communicating with another one of said computers through said switched network;
 - said communication device including a transmission section for transmitting a communication to said switched network and a reception section for receiving a communication from said switched network;
 - each of said transmission section and said reception section including a translation look aside buffer for retaining a plurality of translation look aside buffer entries;
 - said processor issuing the communication command which includes information of that one of the computers which is a sending source;
 - said reception section determining one of the translation look aside buffer entries which is to be used in accordance with the computer of the sending source,
 - wherein said processor does not carry out any address conversion but instead issues out the communication command and a logical address to said communication device.

20. (Previously Presented) An inter-commuter network system as claimed in claim 19, wherein said transmission section produces a communication packet including the information of the computer of the sending source and transmits the communication packet to another one of said computers.